a data base storing geographical coordinates of grade crossings where [a road intersects a railroad track] <u>roads intersect respective railroad tracks</u>;

a processor that is programmed to compare the geographical location of the vehicle with the coordinates of the grade crossing to determine whether the vehicle is within a prescribed distance from the grade crossing; and

said processor is programmed to provide a sensory indication when said comparison is affirmative, when said detector detects a proximity of the train near the vehicle, and when the heading of the vehicle will cause the vehicle to intersect the grade crossing.

--23. A train collision avoidance system, comprising:

a processor programmed to process GPS coordinate data received from a satellite to determine a geographical location of a road vehicle;

said processor programmed with a database identifying intersections where railroad tracks intersect roads;

said processor programmed to periodically determine a geographical location of the road vehicle, and once the location of the road vehicle is determined, the processor defines an envelope of protection circumscribing the road vehicle so that said envelope of protection moves with the road vehicle;

said processor programmed to read said database to determine if a railroad intersections lies within said envelope of protection; and

said processor programmed to determine if a train is in a proximate area of the road vehicle, and if so, and if an intersection is within said envelope of protection, said processor is programmed to provide a warning in the road vehicle.--